

REMARKS

No claims have been amended, added, or cancelled. Hence, Claims 23-24, 26-29 and 37-39 are pending in this application.

ALLOWED CLAIMS

The Examiner is thanked for the allowance of Claims 23, 24, and 26-29.

SUMMARY OF REJECTIONS

Claims 37-39 were rejected under 35 U.S.C. § 103(a) over U.S. Patent 6,324,533 (hereinafter “Agrawal”) in view of U.S. Patent 6,513,029 (hereinafter “Agrawal2”).

Claim 37 Is Patentable Over Agrawal

Independent Claim 37 recites, with emphasis added:

A method comprising performing a machine-executed operation involving instructions, wherein the machine-executed operation is at least one of:
A) sending said instructions over transmission media;
B) receiving said instructions over transmission media;
C) storing said instructions onto a machine-readable storage medium; and
D) executing the instructions;
wherein said instructions are instructions which, when executed by one or more processors, cause the performance of a frequent itemset operation by performing the steps of:
 dynamically selecting which occurrence counting technique to use from a plurality of available occurrence counting techniques **based on conditions existing before the frequent itemset operation is performed in a computing environment in which the frequent itemset operation is to be performed,**
 wherein the conditions include workload of a computer system in which the frequent itemset operation is to be performed, and an amount of volatile memory available to store a candidate prefix tree; and
during said frequent itemset operation, using said selected occurrence counting technique to count occurrences of at least one combination to determine whether said at least one combination satisfies frequency criteria associated with said frequent itemset operation.

The elements in Claim 37 which are emphasized above are not taught, suggested, or disclosed in *Agrawal*.

During a frequent itemset operation, an occurrence counting technique is used. A number of different occurrence counting techniques are available and may be used to perform the frequent itemset operation. Also, the frequent itemset operation is performed in a certain computing environment.

According to the method recited in Claim 37, an occurrence counting technique is selected, from a plurality of available occurrence counting techniques, to be used in a frequent itemset operation. The selection of the occurrence counting technique is based on conditions existing in the computing environment in which the frequent itemset operation is to be performed, before the frequent itemset operation is actually performed. To satisfy Claim 37, one condition that must be considered in the technique selection process is the workload of the computer system in which the frequent itemset operation is to be performed. For example, occurrence counting technique A may be selected if the workload of the computer system is high, while occurrence counting technique B may be selected if the workload of the computer system is low. In this sense, the “workload” of the computer system indicates how busy the computer system is.

Agrawal does not teach “dynamically selecting which occurrence counting technique to use from a plurality of available occurrence counting techniques based on conditions existing before the frequent itemset operation is performed in a computing environment in which the frequent itemset operation is to be performed”. The Examiner has admitted this in the Final Office Action (see Final Office Action page 5). However, the Examiner also alleges that *Agrawal2* discloses this feature, citing to *Agrawal2*’s disclosures regarding a “workload”.

The Applicants respectfully submit that *Agrawal2* also does not teach the features of Claim 37 emphasized above. First, *Agrawal2* does not teach or suggest anywhere the selection of occurrence counting techniques. Rather, *Agrawal2* is concerned with the selection of indexes and materialized views. Therefore, *Agrawal2*, even if combined with *Agrawal*, would not teach “dynamically **selecting which occurrence counting technique** to use from a plurality of available occurrence counting techniques based on conditions existing before the frequent itemset operation is performed in a computing environment in which the frequent itemset operation is to be performed” (emphasis added).

Furthermore, *Agrawal2*’s teaching regarding a “workload” does not teach Claim 1’s additional feature of “wherein the conditions include workload of a computer system in which the frequent itemset operation is to be performed”. *Agrawal2* specifically defines “workload” to be “a set of queries and updates which are run against a given database” (see *Agrawal* col. 2 ln. 39-40). This definition, however, does not make sense in the context of Claim 37. It is precisely in executing a query that a frequent itemset operation may be performed, and an occurrence counting technique is selected in performing the frequent itemset operation. Therefore, it makes no logical sense to select an occurrence counting technique based on “a set of queries and updates which are run against a given database”.

As such, the combination of *Agrawal* and *Agrawal2* would not teach or suggest, to a person of ordinary skill in the art, all the features of Claim 37 at the time of the invention.

Claims 38-39 depends from Claim 37, and therefore, include all of the limitations of Claim 37. It is therefore respectfully submitted that Claims 38-39 is patentable over the cited art for at least the reasons set forth herein with respect to Claim 37.

CONCLUSION

It is respectfully submitted that all of the pending claims are in condition for allowance and the issuance of a notice of allowance is respectfully requested. If there are any additional charges, please charge them to Deposit Account No. 50-1302.

The Examiner is invited to contact the undersigned by telephone if the Examiner believes that such contact would be helpful in furthering the prosecution of this application.

Respectfully submitted,

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